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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,624	10/30/2003	Chi H. Koa	3242-000009	7296

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EXAMINER

COLETTA, LORI L

ART UNIT

PAPER NUMBER

3612

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/697,624

Applicant(s)

KOA ET AL.

Examiner

Lori L. Coletta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 8, 10-18, 20, 21 and 23-30 is/are rejected.
- 7) ☒ Claim(s) 6, 9, 19 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10302003
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “24” has been used to designate both the **upper edge** [0023] and **slot** [0023 and 0024]. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The disclosure is objected to because of the following informalities:

“pressure sensitive stripe” [0027] needs to be changed to --pressure sensitive strip--.

Appropriate correction is required.

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*Claim Objections*

3. Claims 1-24, 26 and 28 are objected to because of the following informalities:

Regarding claim 1, "said assembly" (line 8) needs to be changed to --said door assembly--.

Claim 8 recites the limitation "said panel assembly" in lines 2 and 3. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 12, "said assembly" (line 9) needs to be changed to --said vehicle panel assembly--.

Regarding claim 26, "said material" (line 2) needs to be changed to --said semi-rigid moisture barrier material--.

Claim 28 recites the limitation "said deposited material" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 25-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Beulat 5,595,415.

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Regarding claim 25, Beaulat '415 discloses a barrier panel (3) comprising a body of semi-rigid moisture barrier material having a relief pattern (6) comprising a plurality of raised regions relative to a plurality of lower regions, said relief pattern arranged to diffuse sound waves directed toward said barrier panel in Figure 1.

Regarding claim 26, Beaulat '415 discloses the barrier panel (3) wherein said raised regions comprise protrusions of said material outward from a surface of the body.

Regarding claim 27, Beaulat '415 discloses the barrier panel (3) wherein said raised regions comprise material deposited on a surface of said body.

Regarding claim 28, Beaulat '415 discloses the barrier panel (3) wherein said deposited material is the same as said semi-rigid moisture material.

Regarding claim 29, Beaulat '415 discloses a barrier panel (3) wherein said body has first and second opposite major surfaces, a first group of said raised regions is disposed at said first surface and a second group of said raised regions is disposed at said second surface.

Regarding claim 30, Beaulat '415 discloses the barrier panel (3) wherein each of said raised regions of said first group is defined by a peak at said first surface and said peak defines a valley at said second surface, the valley constituting one of said lower regions.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 1-5, 7, 8, 10-18, 20, 21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koa et al. 6,412,852 in view of Beaulat 5,595,415.

Regarding claim 1, Koa et al. '852 discloses a door assembly (10), comprising an interior panel (13) and an exterior panel (11); a semi-rigid barrier sheet (36) disposed between said interior and exterior panels; one or more features (43) formed in said semi-rigid barrier sheet and said interior and exterior panels including bosses (25) for mounting said semi-rigid sheet to said assembly in Figure 1

However, Koa et al. '852 does not show a plurality of resonance frequency diffusion (RFD) reliefs formed in said semi-rigid barrier sheet that diffuse sound waves directed toward said semi-rigid barrier sheet.

Beaulat '415 teaches a plurality of resonance frequency diffusion reliefs (6) formed in a semi-rigid barrier (3) sheet that diffuse sound waves directed toward the semi-rigid barrier sheet in Figure 1.

Regarding claim 1, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the door assembly of Koa et al. '852 with a plurality of resonance frequency diffusion reliefs formed in the semi-rigid barrier sheet, as taught by Beaulat '415, in order to soundproof the door assembly.

Regarding claim 2, Koa et al. '852, as modified, discloses the door assembly wherein said semi-rigid barrier sheet is formed of a water resistant material.

Regarding claim 3, Koa et al. '852, as modified, discloses the door assembly wherein said semi-rigid barrier sheet is formed of a thermally formable material (thermoplastic).

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Regarding claim 4, Koa et al. '852, as modified, discloses the door assembly wherein said thermally formable material is selected from a group consisting of a thermoplastic polymeric material and a thermoplastic olefin (TPO) (column 5, lines 34-47).

Regarding claim 5, Koa et al. '852, as modified, discloses the door assembly wherein said TPO comprises a cross-linked polypropylene and polyethylene blend.

Regarding claim 7, Koa et al. '852, as modified, discloses the door assembly further comprising a layer of sound attenuation material that absorbs non-diffused sound waves that pass through semi-rigid barrier sheet.

Regarding claim 8, Koa et al. '852, as modified, discloses the door assembly further comprising a pressure sensitive adhesive material that adhesively engages said semi-rigid barrier and said panel assembly.

Regarding claim 10, Koa et al. '852, as modified, discloses the door assembly wherein said RFD reliefs comprise a plurality of concave shapes facing said interior panel.

Regarding claim 11, Koa et al. '852, as modified, discloses the door assembly wherein said RFD reliefs comprises a plurality of concave shapes facing said exterior panel.

Regarding claim 12, Koa et al. '852 discloses a vehicle panel assembly (10), comprising an exterior panel assembly (12) that defines a cavity; a trim panel (20) attached to said exterior panel assembly; and a molded water-shield (35) disposed between said trim panel and said exterior panel assembly, comprising a semi-rigid barrier sheet; one or more features (43) formed in said semi-rigid barrier sheet accommodating components housed between said semi-rigid barrier sheet and said cavity including bosses (25) for mounting said semi-rigid sheet to said assembly in Figure 1.

However, Koa et al. '852 does not show a plurality of resonance frequency diffusion (RFD) reliefs formed in said semi-rigid barrier sheet that diffuse sound waves directed toward said semi-rigid barrier sheet.

Beaulat '415 teaches a plurality of resonance frequency diffusion reliefs (6) formed in a semi-rigid barrier (3) sheet that diffuse sound waves directed toward the semi-rigid barrier sheet in Figure 1.

Regarding claim 12, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the vehicle panel assembly of Koa et al. '852 with a plurality of resonance frequency diffusion reliefs formed in the semi-rigid barrier sheet, as taught by Beaulat '415, in order to soundproof the door assembly.

Regarding claim 13, Koa et al. 852, as modified, discloses the vehicle panel assembly further comprising a glass sheet (18) that is slidably supported by said exterior panel assembly.

Regarding claim 14, Koa et al. 852, as modified, discloses the vehicle panel assembly wherein said semi-rigid barrier sheet is formed of a water resistant material.

Regarding claim 15, Koa et al. 852, as modified, discloses the vehicle panel assembly wherein said semi-rigid barrier sheet is formed of a thermally formable material (thermoplastic).

Regarding claim 16, Koa et al. 852, as modified, discloses the vehicle panel assembly wherein said thermally formable material is selected from a group consisting of a thermoplastic polymeric material and a thermoplastic olefin (TPO) (column 5, lines 34-47).

Regarding claim 17, Koa et al. 852, as modified, discloses the vehicle panel assembly wherein said semi-rigid barrier sheet is formed of a thermoplastic olefin elastomer (TPO).



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Regarding claim 18, Koa et al. 852, as modified, discloses the vehicle panel assembly wherein said TPO comprises a cross-linked polypropylene and polyethylene blend.

Regarding claim 20, Koa et al. 852, as modified, discloses the vehicle panel assembly further comprising a layer of sound attenuation material that absorbs non-diffused sound waves that pass through said semi-barrier sheet.

Regarding claim 21, Koa et al. 852, as modified, discloses the vehicle panel assembly wherein said molded water-shield further comprises a pressure sensitive adhesive material that adhesively engages said semi-rigid barrier and said exterior panel assembly.

Regarding claim 23, Koa et al. 852, as modified, discloses the vehicle panel assembly wherein said RFD reliefs comprise a plurality of concave shapes facing said trim panel.

Regarding claim 24, Koa et al. 852, as modified, discloses the vehicle panel assembly wherein said RFD reliefs comprise a plurality of concave shapes facing said exterior panel assembly.

***Allowable Subject Matter***

8. Claims 6, 9, 19 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lori L. Coletta whose telephone number is (703) 306-4614.

The examiner can normally be reached on Monday-Friday 6:00am-2:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Dayoan can be reached on (703) 308-3102. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lori L. Coletta

Examiner

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Lori L. Coletta  
June 30, 2004